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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,463	12/06/2004	Koji Yokoi	SOHMEI.PT1012	1354

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EXAMINER

ABU-ALI, SHUANGYI

ART UNIT PAPER NUMBER

1755

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/517,463	YOKOI, KOJI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shuangyi Abu-Ali	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/13/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

(1)

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3,4, and 6-15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP No. 03-153523 to Wakasa et al.

Regarding claims 1 and 4, Wakasa et al. disclose a flaky porous laminar alumina, which has an average particle size from 0.1- 50  $\mu\text{m}$ , an aspect ratio of 10 – 100, a specific surface area of 30 – 350  $\text{m}^2/\text{g}$ (page 4, line 20; page 2, claim 1). The thickness of the porous particle is less than 50  $\mu\text{m}$  (page 7, lines 13-16).

Regarding claim 3, Wakasa et al. disclose that the laminar alumina will maintain the shape of original starting materials. Therefore the size of the original alumina will be in the range of 5-500  $\mu\text{m}$  (page 9, lines 5-7).

Regarding claims 6-7 and 9-15, Wakasa et al. disclose that since the porous laminar alumina particle has a large surface area, it can be used as a composite carrier in may applications, such as cosmetic, coating, plastic and ink (page 15, lines 17-18).

Regarding claim 8, Wakasa et al describe in their invention that the percentage of pigment contained in cosmetic composite is 23.3%( page 19, lines 8-9).

(2)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(3)

Claims 2, 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 03-153523 to Wakasa et al., as set forth in section (1), in further view of U.S. Patent No. 6, 841,609 B2 to Chapman et al.

Wakasa et al. disclose specifically a laminar porous alumina particle, which has a diameter of 0.1- 50  $\mu\text{m}$ , aspect ratio of 10 – 100, specific surface area of 30 – 350  $\text{m}^2/\text{g}$ , and thickness of less than 50  $\mu\text{m}$ . But they are silent about the size of the pore as applicant claimed in claim 2. However, Chapman et al. disclose that the pore size of

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porous metal oxide less than 600 Å is preferred. The pore of less than 600 Å will be less subjected to total collapse during coating process (col. 2, lines 41-59).

It would have been obvious to one of ordinary skill in the art at the time of invention to provide the porous metal oxide of Wakasa et al. with a pore size less than 600 Å, as taught by Chapma et al., motivated by the fact that the pore of that size will resist total collapse in future application.

Regarding claims 5 and 16, Wakasa et al are silent about silicon oxide porous material and using porous metal oxide as coating material on paper in their disclosure. However, Chapman et al disclose that porous silicon oxide can be used to form a porous layer on paper to act as ink-receptive layer (col. 3, line 55 and col.2, lines 60-62).

It would have been obvious to one of ordinary skill in the art at the time of invention to take advantage of the information disclosed by Chapman et al. about the good ink absorption properties of porous metal oxide material and therefore to use Wakasa et al. invention in paper coating material.

(4)

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 03-153523 to Wakasa et al., as set forth in section (1), in further view of U.S. Patent No. 4,882,133 to Saegusa.

Although Wakasa et al. disclose that their invention has similar properties as applicant claims in claim 1, they do not followed the procedure, which the applicant claims in claim 17, to make it.

However, Saegusa provides a same so-gel process to make flaky material (col. 1 lines 60-68 and col. 4, lines 59-60).

- 1) Coating liquid sol of metallic compound, such as silica sol LudoxHs-40, which has an average size of 12 nm, on a surface to form a film;
- 2) Applying heat to solidify the film;
- 3) Removing dispersion medium from the film;
- 4) Scraping off the film from the surface;
- 5) Heating the film in the temperature range according to the finished product uses.

Therefore, it would have been obvious to one ordinary skill in the art at the time of invention to follow Saegusa method to make a porous flaky metal oxide, as Wakasa et al described in claim 1, motivated by the fact that Saegusa discloses that his method is easy to operate and the product will have uniform size, smooth surface and equivalent optical effect (col.3, lines 1-10).

(5)

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Such prior art includes reference A-E and H-K listed on PTO-

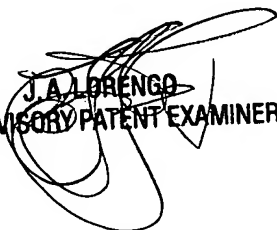
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892. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuangyi Abu-Ali whose telephone number is 571-272-6453. The examiner can normally be reached on Monday - Friday 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SA

  
J. A. LORENCO  
SUPERVISORY PATENT EXAMINER